

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A personal computer system for maintaining trust in the content of a digital data file, comprising:

a personal computer having installed therein a trusted time source to provide a certifiable time for an unalterable time stamp, wherein said certifiable time confirms at least one of said digital data file's access, creation, modification, receipt, or transmission;

means for receiving a request to save said digital data file from a user;

first means for saving the said digital data file at a moment in time;

means for retrieving from said trusted time source a date and a time corresponding to said moment in time, wherein said moment in time is substantially the current time of said trusted time source corresponding to receipt of said request;

first means for appending said date and said time retrieved from said trusted time source to said saved digital data file;

first means for signing said saved digital data file with said date and said time retrieved from said trusted time source appended thereto;

means for hashing said signed digital data file to produce a digest;

second means for signing said digest with a key to produce a certificate;

second means for appending said certificate to said saved digital data file; and

second means for saving said digital data file with said certificate appended thereto; and

means for verifying trust in the content of said digital data file with said certificate appended thereto.

Claim 2 (Currently Amended): The personal computer system according to claim 1, ~~further comprising means for verifying the authenticity of said file with said certificate appended thereto~~ wherein said trusted time source includes a tamper-evident means.

Claim 3 (Currently Amended): The personal computer system according to claim 2 1, wherein said verification means ~~comprises~~ includes a third means for signing said ~~saved~~ digital data file with said date and said time retrieved from said trusted time source appended thereto with an ~~ID~~ identifier.

Claim 4 (Currently Amended): The personal computer system according to claim 3, wherein said ~~ID~~ identifier is selected from the group consisting of an ~~ID~~ identifier corresponding to a ~~user~~ said user, an ~~ID~~ identifier corresponding to a system used by said user, and an ~~ID~~ identifier corresponding to an enterprise within which said user uses the personal computer system.

Claim 5 (Currently Amended): The personal computer system according to claim 4, wherein said user ~~ID~~ identifier is selected from the group consisting of a plurality of characters identifying said user, first data representing an iris scan of said user, second data representing a retina scan of said user, third data representing a finger scan of said user, fourth data representing said user's hand geometry, fifth data representing said user's voice, sixth data representing said user's signature, and combinations of said plurality of characters, first, second, third, fourth, fifth, and sixth data.

Claim 6 (Original): The personal computer system according to claim 1, wherein said trusted time source comprises:

a real time clock; and

a battery coupled to and powering said real time clock.

Claim 7 (Original): The personal computer system according to claim 6, wherein said real time clock and said battery are installed on a motherboard of said personal computer.

Claim 8 (Original): The personal computer system according to claim 6, wherein said real time clock and said battery are installed on a baseboard of said personal computer.

Claim 9 (Original): The personal computer system according to claim 6, wherein said real time clock and said battery are installed on an expansion card adapted to be coupled to a motherboard of said personal computer.

Claim 10 (Original): The personal computer system according to claim 6, wherein said real time clock and said battery are installed on an expansion card adapted to be coupled to a baseboard of said personal computer.

Claim 11 (Original): The personal computer system according to claim 6, wherein said real time clock and said battery are installed on an external device adapted to be coupled to said personal computer.

Claim 12 (Original): The personal computer system according to claim 11, wherein said external device comprises a dongle.

Claim 13 (Original): The personal computer system according to claim 11, wherein said external device comprises a PCMCIA card.

Claim 14 (Original): The personal computer system according to claim 11, wherein said external device comprises a smart card.

Claim 15 (Original): The personal computer system according to claim 11, wherein said external device comprises a removable computer-readable medium.

Claim 16 (Original): The personal computer system according to claim 15, wherein said removable computer-readable medium is selected from the group consisting of a magnetic hard disk, a floppy disk, an optical disk, a CD-ROM, a CD-R, a CD-RW, a disk compliant with DVD standards, a

magneto-optical disk, a magnetic tape, a memory chip, a carrier wave used to carry computer readable electronic data, such as are used in transmitting and receiving an e-mail or in accessing a network, including the Internet, intranets, extranets, virtual private networks (VPN), local area networks (LAN), and wide area networks (WAN), and any other storage device used for storing data accessible by a computer.

Claim 17 (Currently Amended): A method of maintaining a digital data file in a personal computer, comprising:

providing a trusted time source in the personal computer, wherein said trusted time source provides a certifiable time for an unalterable time stamp, wherein said certifiable time confirms at least one of said digital data file's access, creation, modification, receipt, or transmission;

receiving a request to save said digital data file from a user;

saving ~~the~~ said digital data file at a moment in time;

retrieving from said trusted time source a date and a time corresponding to said moment in time, wherein said moment in time is substantially the current time of said trusted time source corresponding to receipt of said request;

appending said date and said time retrieved from said trusted time source to said ~~saved~~ digital data file;

signing said ~~saved~~ digital data file with said date and said time retrieved from said trusted time source appended thereto;

hashing said ~~signed~~ digital data file to produce a digest;

signing said digest with a key to produce a certificate;

appending said certificate to said ~~saved~~ digital data file; ~~and~~

saving said file with said certificate appended thereto; and

verifying trust in the content of said digital data file with said certificate appended thereto.

Claim 18 (Currently Amended): The method according to claim 17, further ~~comprising the step of~~ comprising:

providing tamper-evident means for labeling said trusted time source.

Claim 19 (Currently Amended): The method according to claim 17, wherein said moment in time corresponds to an access of ~~the~~ said digital data file.

Claim 20 (Currently Amended): The method according to claim 17, wherein said moment in time corresponds to a creation of ~~the~~ said digital data file.

Claim 21 (Currently Amended): The method according to claim 17, wherein said moment in time corresponds to a modification of ~~the~~ said digital data file.

Claim 22 (Currently Amended): The method according to claim 17, wherein said moment in time corresponds to a receipt of ~~the~~ said digital data file.

Claim 23 (Currently Amended): The method according to claim 17, wherein said moment in time corresponds to a transmission of ~~the~~ said digital data file.

Claim 24 (Currently Amended): The method according to claim 17, further comprising ~~the steps of~~:

appending to an e-mail said ~~saved~~ digital data file with said certificate appended thereto;

transmitting said e-mail, with said ~~appended-saved~~ digital data file having said certificate appended thereto, to a remote computer;

determining a first delay time associated with said transmission-~~step~~;

adding said first delay time to said moment in time to provide a first relative trusted time at which said e-mail was received by said remote computer, wherein a first relative trusted time is determined using said addition; and

storing said first relative trusted time in ~~the~~ said personal computer.

Claim 25 (Currently Amended): The method according to claim 24, further ~~comprising~~ the step of comprising:

appending a request for return receipt of a message indicating a remote time at which said e-mail was opened at said remote computer.

Claim 26 (Currently Amended): The method according to claim 25, ~~wherein said e-mail has been opened at said remote computer at said remote time, thereby, transmitting said message, further comprising the steps of~~ comprising:

receiving, at the personal computer at ~~another~~ second moment in time, said message from said remote computer, wherein said message is transmitted by said remote computer when said e-mail has been opened;

determining a second delay time associated with the transmission of said message;

retrieving from said trusted time source a second date and a second time corresponding to said ~~other~~ second moment in time;

subtracting said second delay time from said ~~other~~ second moment in time to provide a second relative trusted time at which said message was ~~received~~ send by the ~~personal~~ said remote computer; and

storing said second relative trusted time in the said personal computer.

Claim 27 (Currently Amended): The method according to claim 26, further ~~comprising the steps of~~ comprising:

determining a differential between said second relative trusted time stored in the said personal computer and said remote time;

storing said differential in the said personal computer; and

~~thereafter using said stored differential to approximate third and subsequent relative trusted times in communications with the remote computer~~ determining a third relative trusted time in communications with said remote computer, wherein said differential is used in said determination.

Claim 28 (Currently Amended): The method according to claim 17, further comprising ~~another~~ a second digital data file and further ~~comprising the steps of~~ comprising:

saving said ~~other~~ second digital data file at a ~~second~~ third moment in time;

retrieving from said trusted time source a third date and a third time corresponding to said ~~second~~ third moment in time;

appending said third date and said third time retrieved from said trusted time source to said ~~other saved~~ second digital data file;

signing said ~~other saved~~ second digital data file with said third date and said third time retrieved from said trusted time source appended thereto;

hashing said ~~signed other~~ second digital data file to produce another digest;

signing said ~~other~~ second digest with a second key to produce another certificate; appending said ~~other~~ second certificate to said ~~other saved~~ second digital data file;

saving said ~~other~~ second digital data file with said ~~other second~~ certificate appended thereto; and

appending said second digital data file with said second certificate appended thereto to said ~~other~~ second digital data file with said ~~other~~ second certificate appended thereto.

Claim 29 (Currently Amended): A method of maintaining trust in the content of a first digital data file and a second digital data file in a personal computer, comprising:

providing a trusted time source in the personal computer, wherein said trusted time source provides a certifiable time for an unalterable time stamp, wherein said certifiable time confirms at least one of said digital data file's access, creation, modification, receipt, or transmission;

receiving a request to save said first digital data file from a user;

saving ~~the~~ said first digital data file at a first moment in time;

retrieving from said trusted time source a date and a time corresponding to said first moment in time, wherein said moment in time is substantially the current time of said trusted time source corresponding to receipt of said request;

appending said date and said time retrieved from said trusted time source to said first ~~saved~~ digital data file;

signing said first ~~saved~~ digital data file with said date and said time retrieved from said trusted time source appended thereto;

hashing said ~~signed~~ first digital data file to produce a first digest;

signing said first digest with a first key to produce a first certificate; appending said first certificate to said first ~~saved~~ digital data file; ~~and~~
saving said first ~~saved~~ digital data file with said first certificate appended thereto;
verifying trust in the content of said first digital data file with said certificate appended thereto; and
appending said first digital data file, with said first certificate appended thereto, to said second digital data file.

Claim 30 (Canceled).

Claim 31 (Currently Amended): The method according to claim ~~30~~ 29, further ~~comprising the steps of comprising:~~

saving ~~the~~ said second digital data file at a second moment in time;
retrieving from said trusted time source a second date and a second time corresponding to said second moment in time;
appending said second date and said second time retrieved from said trusted time source to said second ~~saved~~ digital data file;
signing said second ~~saved~~ digital data file with said date and said time retrieved from said trusted time source appended thereto;
hashing said ~~signed~~ second digital data file to produce a second digest;
signing said second digest with a second key to produce a second certificate;
appending said second certificate to said second ~~saved~~ digital data file; and
saving said second ~~saved~~ digital data file with said second certificate appended thereto.

Claim 32 (Currently Amended): The method according to claim ~~30~~ 29, further ~~comprising the steps of comprising:~~

saving a combination of said first saved file with said first certificate appended thereto and ~~the~~ said second digital data file at a second moment in time;

retrieving from said trusted time source a second date and a second time corresponding to said second moment in time;

appending said second date and said second time retrieved from said trusted time source to said combination;

signing said combination with said second date and said second time retrieved from said trusted time source appended thereto;

hashing said ~~signed~~ combination to produce a ~~third~~ second digest;

signing said ~~third~~ second digest with a second key to produce a ~~third~~ second certificate;

appending said ~~third~~ second certificate to said combination; and

saving said combination with said ~~third~~ second certificate appended thereto.

Claim 33 (Currently Amended): The method according to claim 30 29, wherein ~~the first saved said first digital data file comprises~~ includes an e-mail and ~~the second saved said second digital data file comprises~~ includes a document selected from the group consisting of a word processing document, a spreadsheet document, a database document, an HTML document, a Web page, and an image.

Claim 34 (Currently Amended): The method according to claim 33, further ~~comprising the step of~~ comprising:

transmitting said e-mail with said document appended thereto.

Claim 35 (Currently Amended): The method according to claim 29, wherein ~~the first saved said first digital data file comprises~~ includes a document selected from the group consisting of an e-mail, a word processing document, a spreadsheet document, a database document, an HTML document, a Web page, and an image.